

Figure 1

Reaction Microarrays

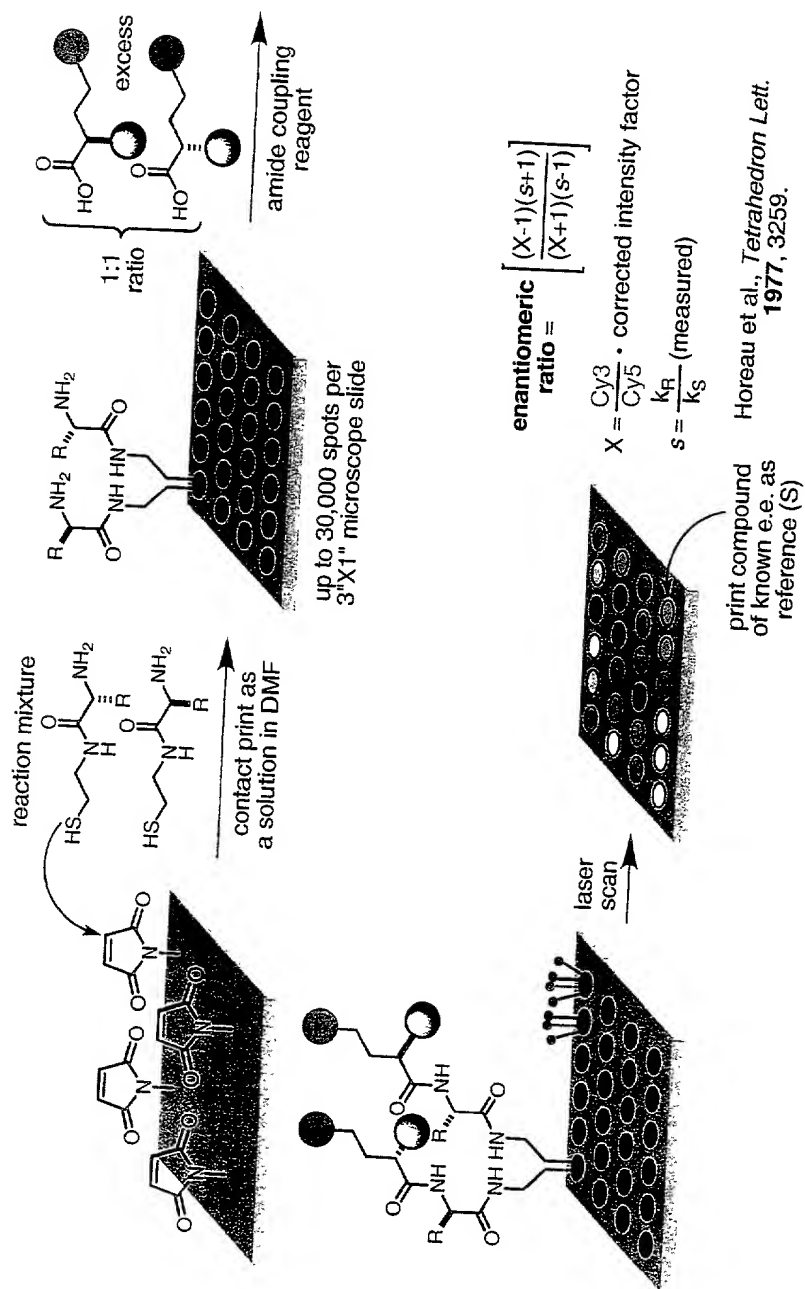


Figure 2

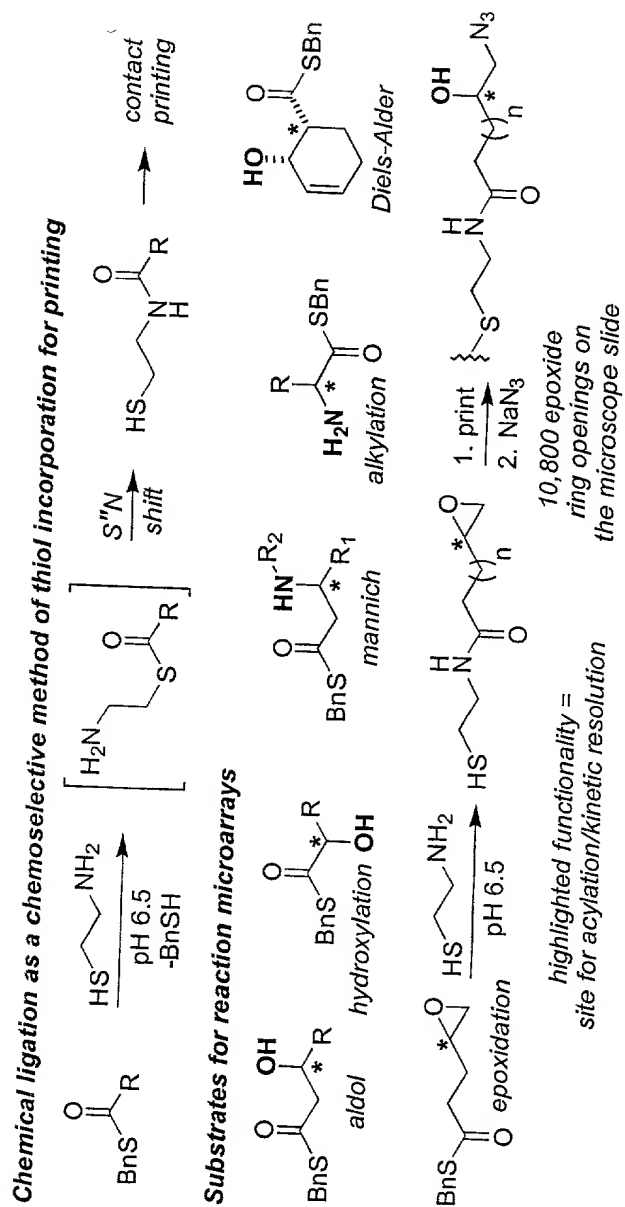
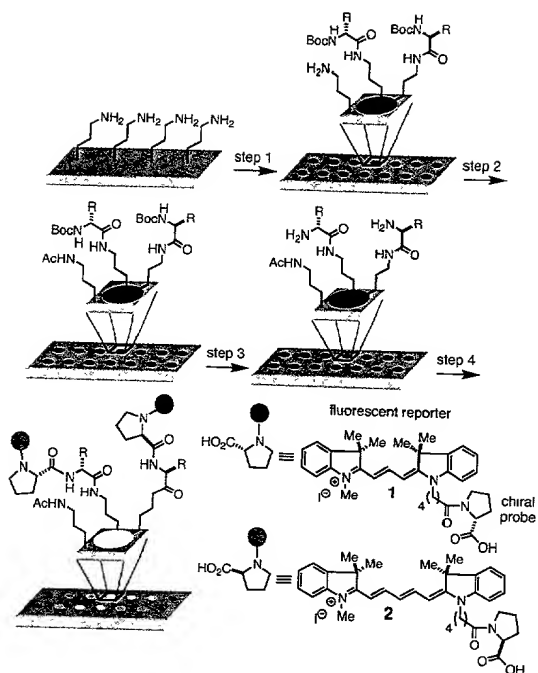


Figure 3



Reagents and conditions: step 1) $\text{BocHNCH(R)CO}_2\text{H}$, PyAOP, $^t\text{Pr}_2\text{NEt}$, DMF, step 2) Ac_2O , pyridine; step 3) 10% $\text{CF}_3\text{CO}_2\text{H}$ and 10% Et_3SiH in CH_2Cl_2 , then 3% Et_3N in CH_2Cl_2 ; step 4) Pentafluorophenyl diphenylphosphinate, $^t\text{Pr}_2\text{NEt}$, 1:1 mixture of 1 and 2, DMF, -20°C .

Figure 4

Attachment of amino acids as their allyl amides to selenyl bromide-functionalized microspheres

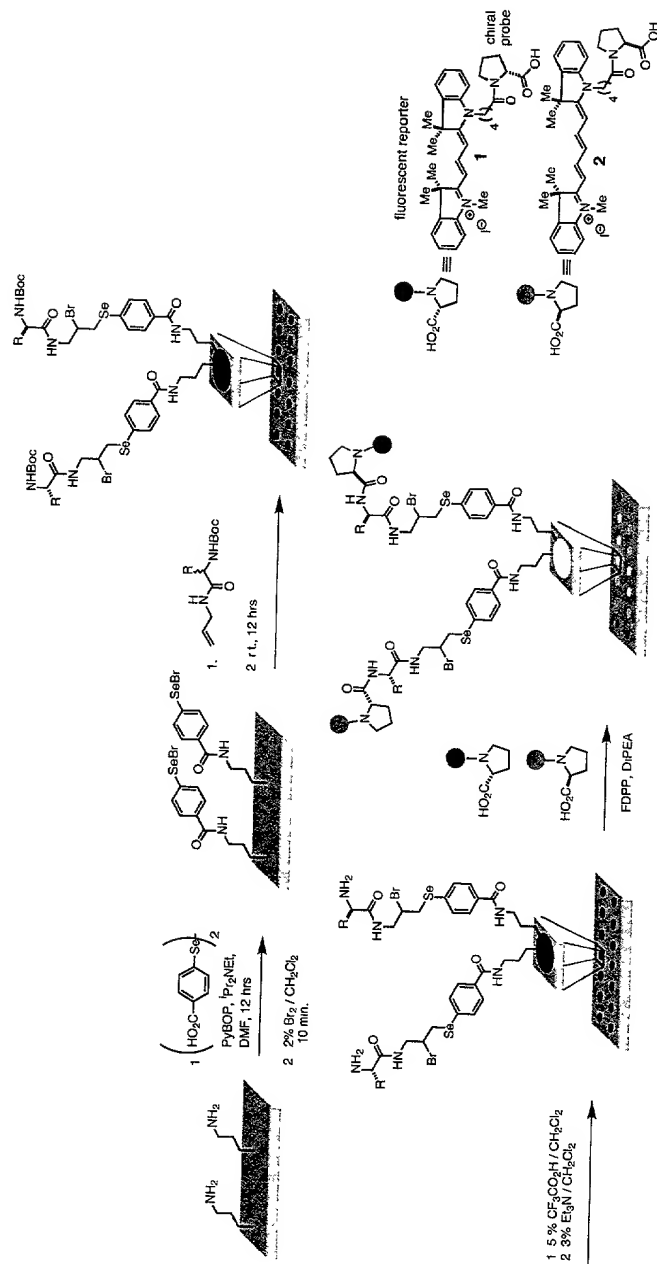


Figure 5

Attachment of amino acids as their allyl amides to nitrene-functionalized microslides

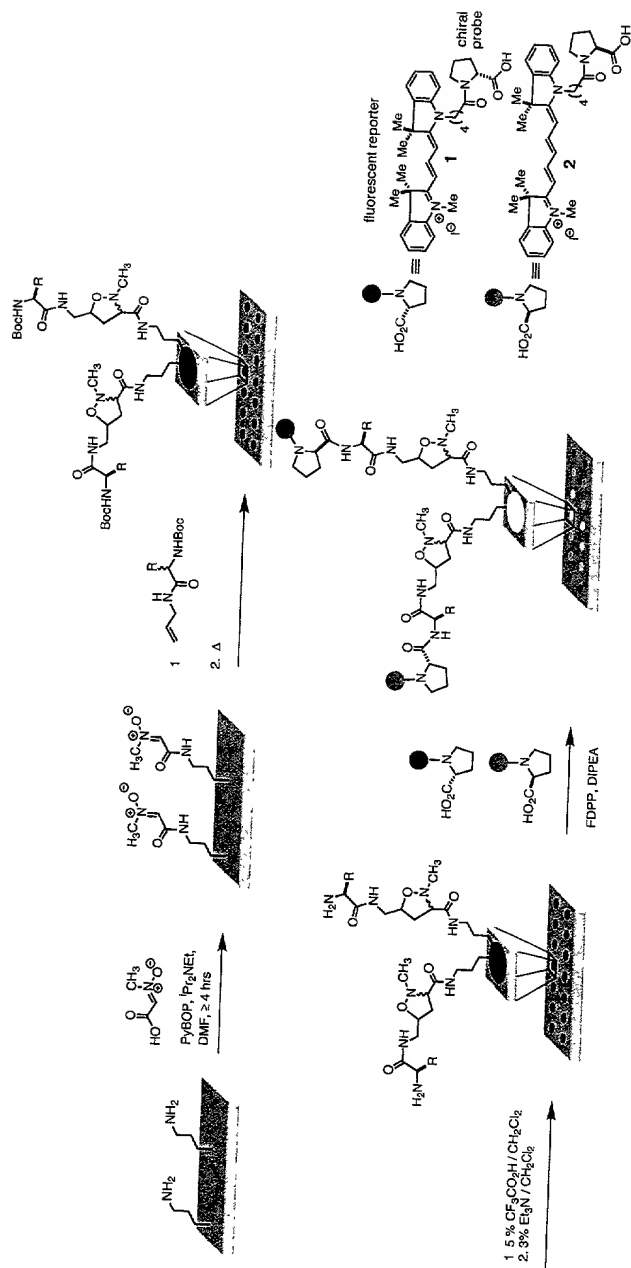


Figure 6

Synthesis of Indocarbocyanine and Indodicarbocyanine Fluorophores

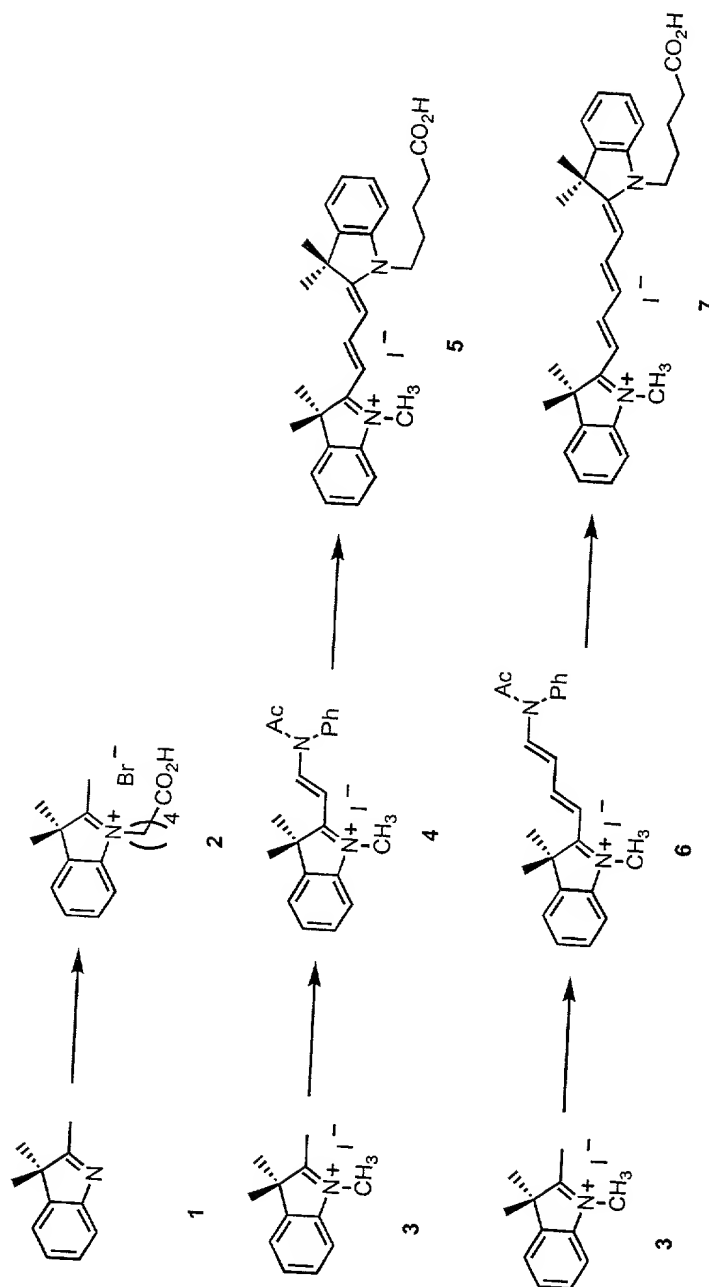


Figure 7

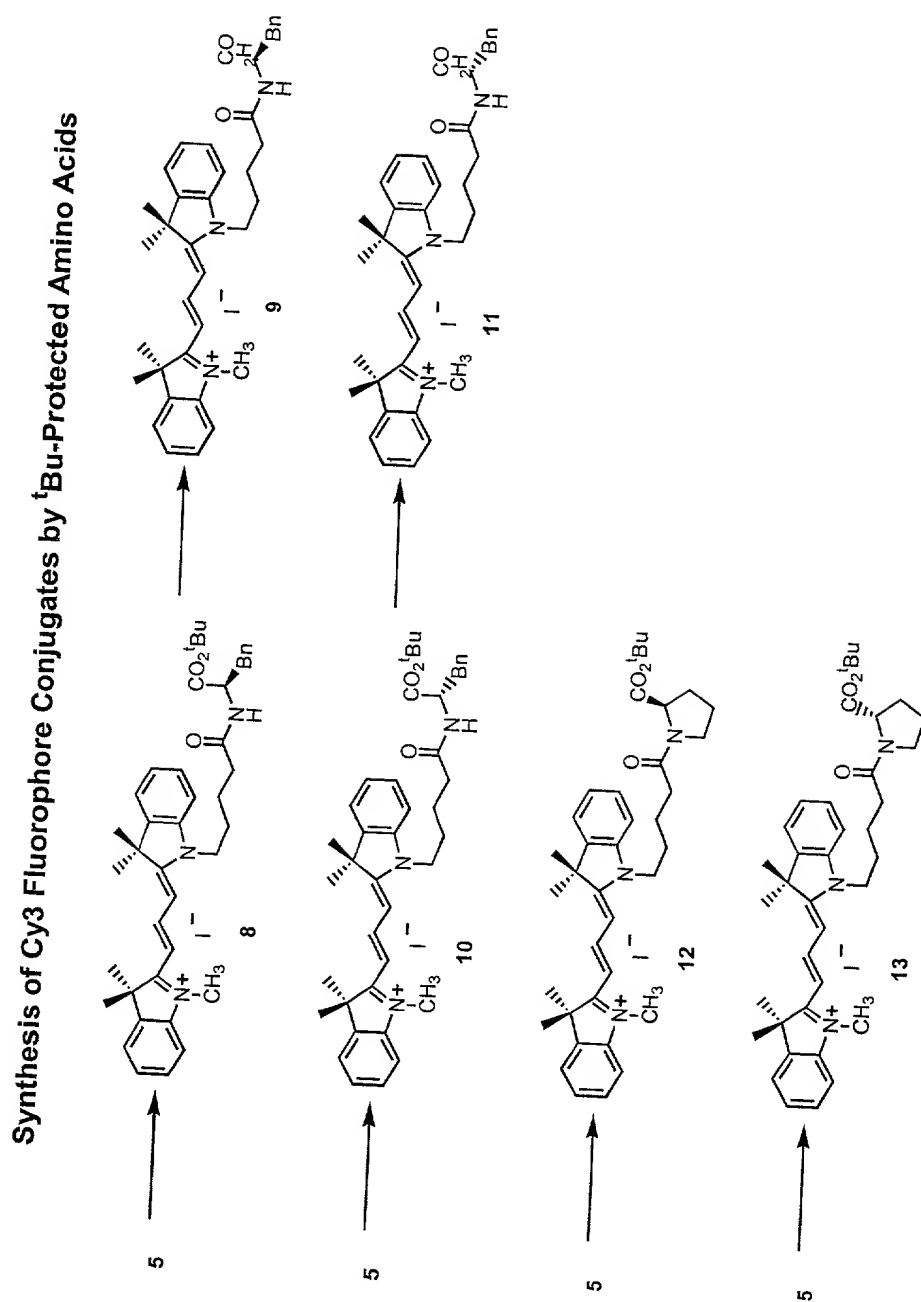
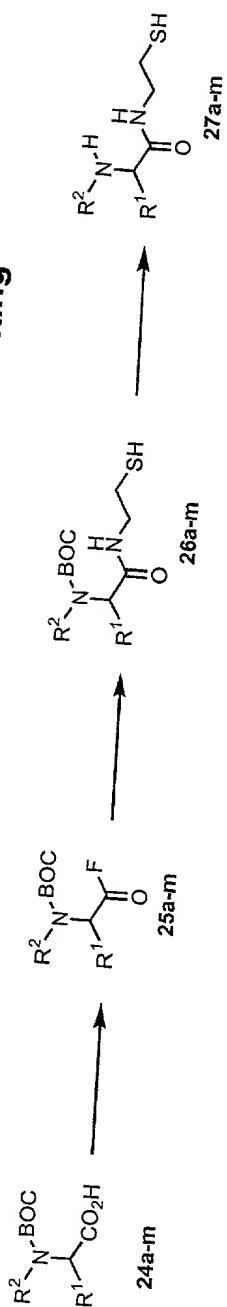


Figure 8

Synthesis of Amino Acid Substrates for Printing



- a $R^1 = R^2 = H$
 (R)-b $R^1 = Me, R^2 = H$
 (S)-c $R^1 = Me, R^2 = H$
 (R)-d $R^1 = CH_2CH_2, R^2 = CH_2-$
 (S)-e $R^1 = CH_2CH_2, R^2 = CH_2-$
 (R)-f $R^1 = iPr, R^2 = H$
 (S)-g $R^1 = iPr, R^2 = H$
 (R)-h $R^1 = tBu, R^2 = H$
 (S)-i $R^1 = tBu, R^2 = H$
 (R)-j $R^1 = Ph, R^2 = H$
 (S)-k $R^1 = Ph, R^2 = H$
 (R)-l $R^1 = Bn, R^2 = H$
 (S)-m $R^1 = Bn, R^2 = H$

Figure 10

Solid Phase Synthesis of Cyanine-Amino Acid Conjugates

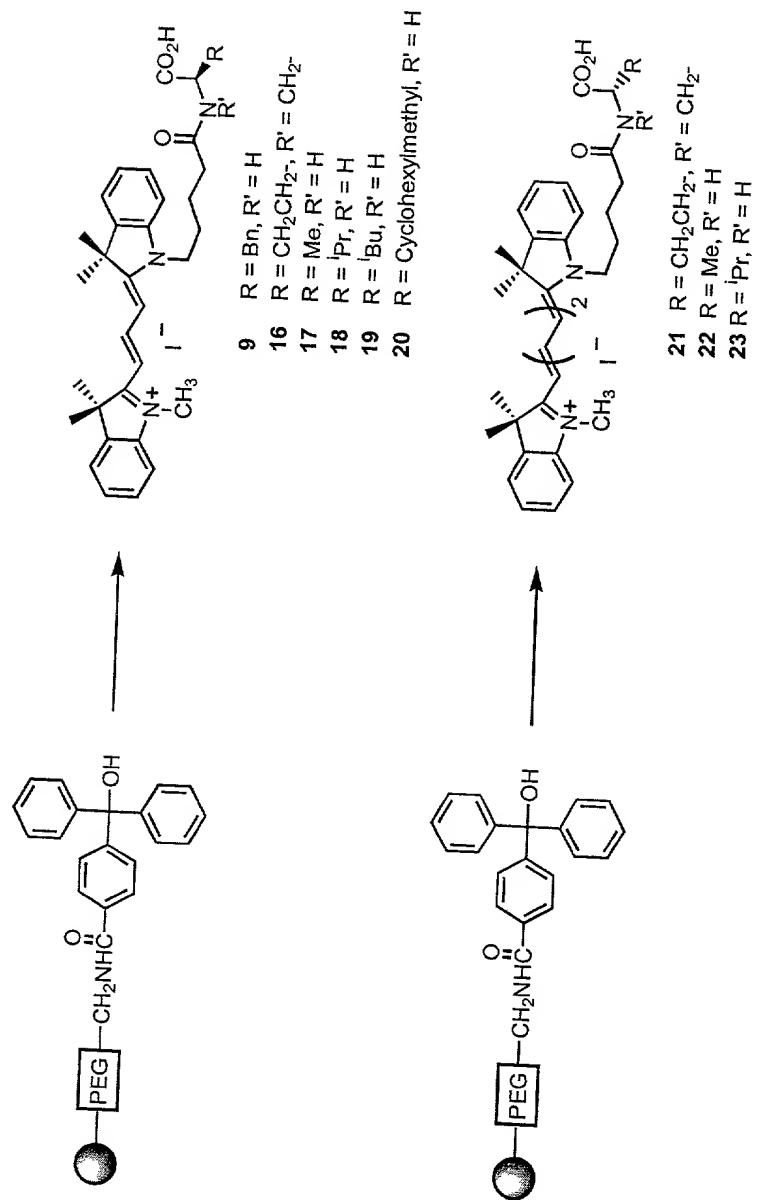


Figure 11

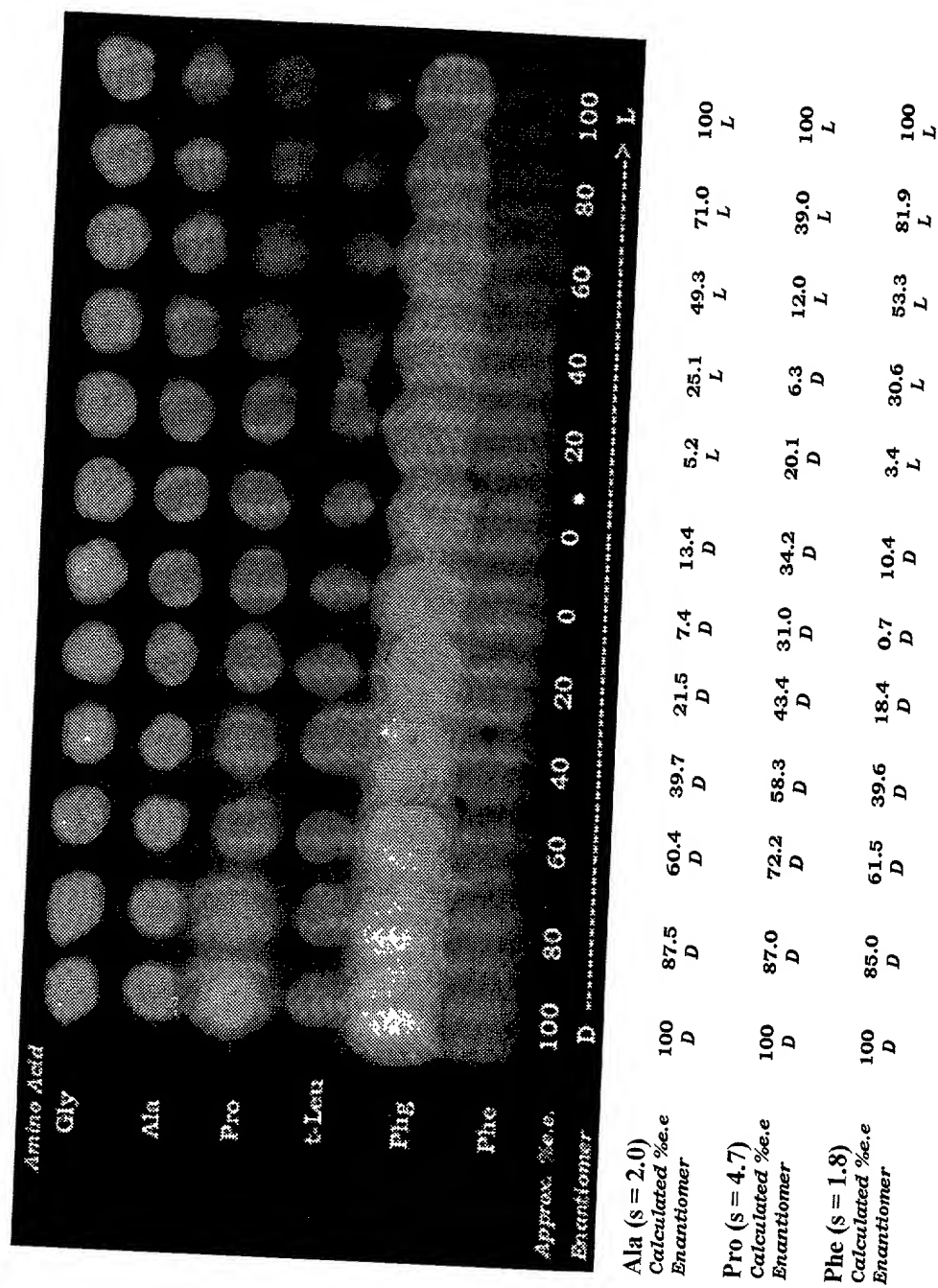


Figure 12

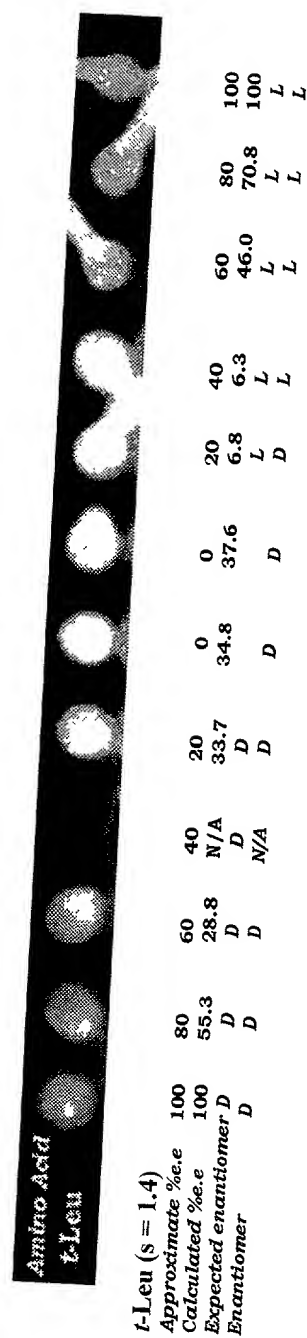
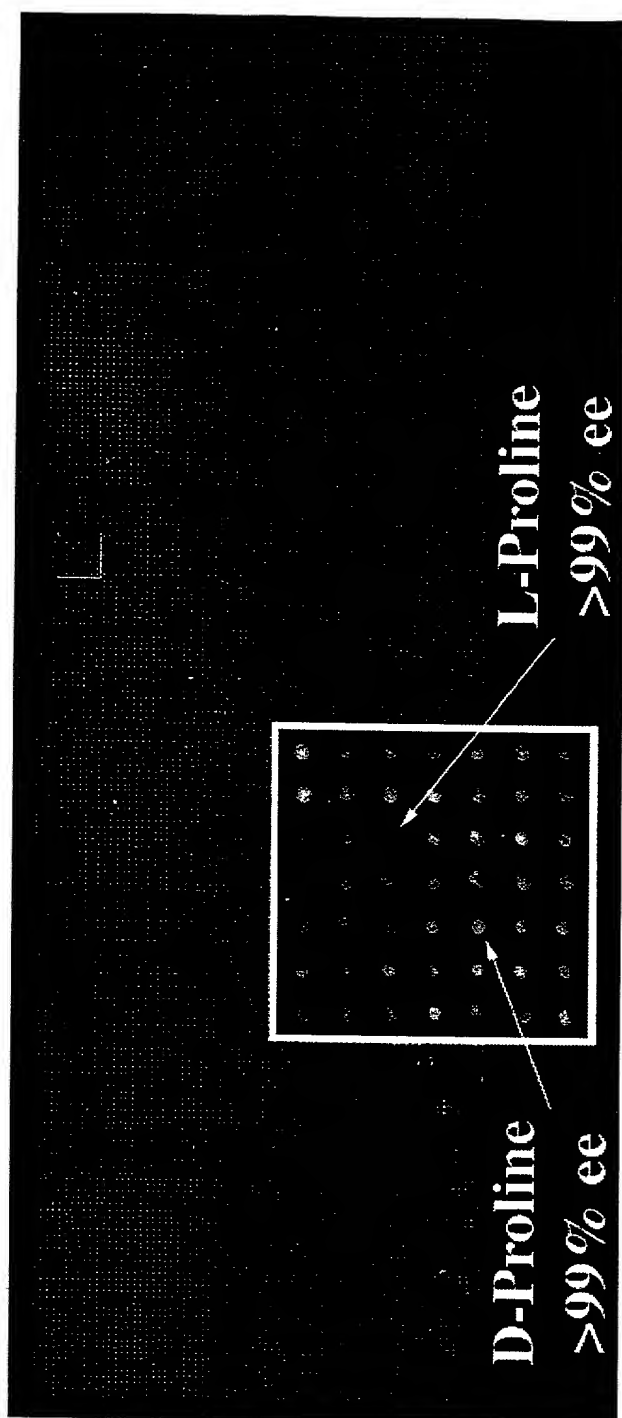


Figure 13

*Figure 15*